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Abstract OF THE DISCLOSURE

5 The invention provides a mechanically stable substrate having at least one through-opening, a perforated membrane which is integral or fluid-tightly connected with the substrate and which extends across the through-opening, and at least one semi-permeable layer which is applied in firmly adhering manner to one or both sides of the membrane, at least in the perforated region thereof, in that the semi-permeable layer or semi-permeable layers is/are secured mechanically in the adjacent perforations and/or by chemical-structural and/or physical adhesion and/or adhesive intermediate layers and/or covalent surface bonding to the adjacent surfaces of the membrane, optionally of the substrate, or of a metallic film optionally additionally applied to one or both sides of the membrane. The invention further provides a process for the production of this sensor- and/or separating element and the use thereof.